

# Abstracts

## Minisymposium 6

### Women's health

#### M6.1 INTERACTION BETWEEN HAZARD EXPOSURES AND ORGANISATIONAL FACTORS IN WOMEN'S OCCUPATIONAL ILLNESSES IN MANUFACTURING INDUSTRIES

J. L. Lu. *National Institutes of Health, University of the Philippines*

**Introduction:** The study aimed at looking into the problems caused by organisational factors such as job autonomy, content of job, nature of task, hazard exposure, and management styles to mental health of women workers; and to look into the association between physical and psychological illnesses.

**Methods:** This was a cross sectional study in an export zone involving 31 industries (stratified according to size and type of industry) and 613 women workers.

**Results:** Results showed that the overall good physical health of workers is affected by overtime and mental work. Workers who have autonomy to accomplish their work were 1.8 times more likely to have better level of physical health ( $p=0.05$ ). Those under close monitoring were 76% more likely to have poor physical health. Those exposed to poor quality of work suffered 44% more poor physical health than those who had good quality of work ( $p=0.05$ ). Other results were: workers who were under work pressure and work overtime were more prone to having skin allergies. Other illnesses such as hypertension, low back pain, and respiratory problems had psychosomatic origin.

**Conclusions:** The study concludes organisational factors were statistically associated with overall physical health and certain occupational illnesses.

#### M6.2 LIFESTYLE, HARASSMENT AT WORK, AND SELF-ASSESSED HEALTH OF FEMALE FLIGHT ATTENDANTS, NURSES, AND TEACHERS IN ICELAND

H. K. Gunnarsdóttir<sup>1</sup>, H. Sveinsdóttir<sup>2</sup>, J. G. Bernburg<sup>3</sup>, H. Friðriksdóttir<sup>3</sup>, K. Tómasson<sup>1</sup>. <sup>1</sup>Research Center for Occupational Health & Working Life, Reykjavík, Iceland; <sup>2</sup>Faculty of Nursing; <sup>3</sup>Faculty of Social Sciences, University of Iceland, Reykjavík, Iceland

**Introduction:** Whether the working environment or lifestyle factors play the biggest role for self-assessed health is often unknown. The aim of our study was to investigate health related lifestyles and harassment at work among female flight attendants in comparison with female nurses and female primary school teachers with the hypothesis that these factors could have an impact on their self-assessed health.

**Methods:** A cross sectional questionnaire study of 371 flight attendants, 600 nurses, and 600 teachers was carried out. All groups received the same questionnaire with a few additional questions as to the special work environment for each group. The questionnaires included questions on social demographic background—that is, age, place of residence, marital status, education, health and lifestyle, work environment, harassment at work, and working conditions. Regression models were used to estimate the mean differences among the occupational groups on lifestyle indicators and harassment, while statistically controlling for social demographic factors.

**Results:** Flight attendants more than nurses or teachers were smokers, 26% v 15% and 17% respectively, and higher proportion of them consumed alcohol at least once a week, 40% v 21% and 16%. Flight attendants were on average one centimetre taller, but weighed on average less, 63.8 kg v 72.4 kg and 72.7 kg respectively. Repeated sexual harassment at work was more common among the flight attendants, 31% v 8% and 4%; whereas bullying, physical violence, and threats were less prevalent among the flight attendants (12%) than among nurses (19%) and teachers (16%). Repeated exposure to sexual harassment, bullying, violence, and threats was related to decreased physical and psychological wellbeing in all the groups. Teachers scored on average significantly lower than did the flight attendants and nurses on general health and physical wellbeing.

**Conclusion:** Lifestyle patterns and harassment at work among three groups of working women seem to influence their self-assessed health. Employers should take exposure to sexual harassment, bullying, violence, and threats into account when they conduct workplace risk assessment. Teachers deserve special attention in further studies.

#### M6.3 WOMEN AT NORWEGIAN WOMEN'S SHELTERS: THEIR EXPERIENCES OF VIOLENCE, THEIR HEALTH RELATED QUALITY OF LIFE, AND EMPLOYMENT

K. Alsaker. *Institute of Public Health and Primary Health Care, University of Bergen and Bergen University College, Faculty of Health and Social Science, Norway*

**Introduction:** There is little knowledge about quality of life among women who experience domestic violence. More knowledge in this area would be useful to help these women in an appropriate manner.

**Methods:** A questionnaire was sent to all women's shelters in Norway. Eighty seven women (of 212 asked to participate) who could understand Norwegian and were staying at women's shelters in Norway for more than one week from October 2002 to April 2003 participated. The instruments Severity of Violence against Women Scale (SVAWS), the Psychological Maltreatment of Women Index (PMWI), and the SF-36 health related quality of life were used. We asked for demographic data and if they were working outside the house.

**Results:** Women staying at women's shelters in Norway have experienced a multitude of threats and actual physical and psychological violence. Only 40% of the battered women were employed outside the home and 38.3% had experienced that their partners refused to let them work outside the home. Seventy per cent had experienced not being allowed to go out of the house when they wanted to. We found no significant different scores in health related quality of life among those who had employment outside the home and those who had not, but a tendency in scores that not being employed outside the home gave higher health related quality of life scores.

**Conclusion:** Women staying more than one week at Norwegian women's shelters have been seriously maltreated both physically and psychologically, and their health related quality of life is extremely low. Being at work is not associated with better health related quality of life for these women, and this raises interesting questions.

#### M6.4 INCREASED STANDARDISED INCIDENCE RATIO OF BREAST CANCER FOR FEMALE ELECTRONIC WORKERS POTENTIALLY EXPOSED TO TRICHLOROETHYLENE

T.-I. Sung<sup>1</sup>, P.-C. Chen<sup>1,2</sup>, L. Jyuhn-Hsiarn Lee<sup>3</sup>, Y.-P. Lin<sup>2,4</sup>, J.-D. Wang<sup>1,2,5</sup>. <sup>1</sup>Institute of Occupational Medicine and Industrial Hygiene, National Taiwan University College of Public Health, Taipei, Taiwan; <sup>2</sup>Center for Health Risk Assessment and Policy, National Taiwan University College of Public Health, Taipei, Taiwan; <sup>3</sup>Department of Neurology, National Taiwan University Hospital, Taipei, Taiwan; <sup>4</sup>Department of Health, National Taiwan University College of Public Health, Taipei, Taiwan; <sup>5</sup>Department of Internal Medicine, National Taiwan University Hospital, Taipei, Taiwan

**Introduction:** In 1994, a hazardous waste site contaminated by a former electronic factory was found in Taoyuan City, Taiwan. The event has emerged as a major case of the soil and groundwater contamination with suspected occupational cancers. Several different kinds of chlorinated hydrocarbons were used in this factory, including trichloroethylene (TCE). Use of TCE was prohibited across industries in 1975 because of an outbreak of hepatitis in one electronic factory. A retrospective cohort study was conducted to determine if there was any increase of cancer incidence among workers exposed to chlorinated hydrocarbons including TCE (trichloroethylene).

**Methods:** Data from the Bureau of Labor Insurance were retrieved and linked to the National Cancer Registry of the Department of Health. The standardized incidence ratios (SIRs) for different types of cancer were calculated for workers in comparison with the general population.

**Results:** After adjustment for calendar year and age, there were no significant increases of SIRs found in all cancer sites. If female workers were stratified by the year of employment before 1975 when TCE was first prohibited for usage in factory, the SIR increased significantly to 1.30 (95% CI 1.03 to 1.62). The SIR was increased to 1.82, if restricted to workers less than 15 years old and allowed for at least one year

duration of exposure and 10 years since the first exposure. There was no significant increase of SIR for workers employed after 1975.

**Conclusion:** Female workers exposed to TCE were associated with an increased risk of breast cancer, especially in early adolescent period.

#### M6.5 LUNG CANCER RISK AND WORKPLACE EXPOSURES AMONG CHINESE WOMEN IN HONG KONG

Y. L. Chiu, I. T. S. Yu. *Department of Community and Family Medicine, The Chinese University of Hong Kong, Hong Kong SAR, China*

**Introduction:** Chinese women have a high incidence of lung cancer despite a low smoking prevalence. The relation between occupation and lung cancer among Chinese women has seldom been studied. We examined the association between occupation and lung cancer risk among Hong Kong Chinese women, taking into consideration the effects of various potential risk factors in a case control study.

**Methods:** The cases were Chinese women with newly diagnosed primary lung cancer. Control subjects were randomly sampled from the community using the residential telephone directory, and were frequency matched by 10 year age group. Face to face interviews were conducted using a standardised questionnaire, collecting detailed information on lifetime occupational history and potential confounding factors, including

smoking, cooking, and education. Subjects were classified into eight job categories according to their job titles and job tasks. The lung cancer risk for women in various job categories were compared to the reference group "professional/clerkal/sales worker". We estimated odds ratios (OR) and 95% confidence intervals (CI) by unconditional logistic regression.

**Results:** A total of 601 subjects were interviewed, including 279 cases and 322 controls. In univariate analyses, significantly increased risks of lung cancer were observed among housewives (OR 3.10; 95% CI 1.62 to 5.93), domestic helpers (OR 2.92; 95% CI 1.28 to 6.69), and cleaners (OR 2.06; 95% CI 1.13 to 3.74). Construction workers, metal product, and rubber/plastic product workers had insignificant increased risk. The increased risk of lung cancer remained statistically significant among housewives (OR 2.52; 95% CI 1.19 to 5.33) and cleaners (OR 2.05; 95% CI 1.02 to 4.12) and was almost significant among domestic helpers (OR 2.36; 95% CI 0.93 to 5.95), after adjusting for smoking, education, and cooking fumes exposures.

**Conclusion:** The study suggested that Chinese women might be exposed to carcinogens in domestic and cleaning work. Further studies are essential to identify the actual carcinogens in those jobs.

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